

MEMOREX TELEX

5400

AUTOMATED TAPE LIBRARY

Featuring advanced software, tape hardware, and fault-tolerant robotics, the 5400 provides increased throughput, a reduction in operator errors, and improved data availability.



MEMOREX TELEX

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5400

AUTOMATED

TAPE LIBRARY

Combining automated cartridge handling with sophisticated library management software, the Memorex Telex 5400 automated tape library (ATL) offers a new level of performance in tape storage systems. The 5400 ATL keeps the right tapes in the right place at the right time — automatically. Employing a dynamic library management system, the 5400 ATL offers improved tape performance with less human intervention than manual or semi-automated systems. The 5400 may also be used in a static, totally self-contained implementation.

Among its many benefits, the 5400 ATL offers:

- Consistent tape mount times
- Improved batch job throughput
- Significant improvements in overall system productivity.

DYNAMIC LIBRARY MANAGEMENT

Significant operational gains can be obtained by installing a Memorex Telex dynamic library management system containing your installation's most active cartridges.

Independent studies show that over a seven-day period, active cartridges

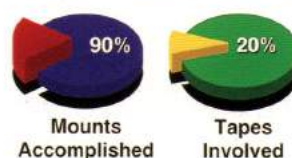
account for only 10% to 20% of an average installation's total cartridge inventory, satisfying about 90% to 95% of all mount requests. As a result, it is possible to cost effectively automate the majority of your workload without automating your entire library.

OPERATIONAL OVERVIEW

The Memorex Telex 5400 ATL is based on a modular design that allows maximum flexibility in configuring the system. The 5400 ATL can be tailored to your particular installation, ensuring a perfect match between tape storage hardware and your business needs. Typical operational activities of the 5400 ATL are summarized below:

- Cartridges are stored in racks that create a bookshelf-like structure on either side of a track.
- Two independent robotic accessors retrieve, mount, unload, and replace tapes quickly and reliably.
- Cartridge tapes are introduced or removed through the Cartridge Access Station (CAS) or the optional Mass Entry Exit Facility (MEEF).
- At your option, cartridges are verified by bar-code labels.
- Cartridge tape drives and their controllers are contained within the ATL.
- When a request is made for a tape mount, the nearest accessor retrieves the tape, moves it to a cartridge, and inserts it. After the tape is processed, the cartridge is removed and returned to its cell by the accessor.

Dynamic Study Results



A small percentage of tape cartridges account for most tape mounts.

- Each accessor is able to travel the entire length of the storage area. If necessary, the Memorex Telex 5400 ATL can operate normally with one accessor while the other is being serviced.

SOFTWARE COMPATIBILITY

The Memorex Telex 5400 ATL features sophisticated Library Management Software (LMS), which supports a comprehensive range of library management functions and facilities. The design of LMS ensures that the full potential of the 5400 ATL is realized without costly operating system modifications.

LMS is installed on the host computer and runs under MVS and VM operating systems. LMS uses standard operating system interfaces and requires no modifications to your operating system code. In addition, LMS provides interfaces to all the popular tape management packages, including TMS and TLMS. Best of all, the Memorex Telex 5400 ATL can be installed and used with *little or no change to current JCL procedures.*

DECISION SUPPORT TOOLS

Memorex Telex decision support software tools enable our consultants to analyze your tape usage and to determine the automated library configuration best suited to your needs. The Intelligent Library Manager (ILM) and Statistical Tape Evaluation Reporting System (STERS) allow us to custom-configure the 5400 ATL for each installation, and our Financial Solution Software (FSS)

allows you to quantify the benefits of automating your tape storage system. These objective software tools make it easy to implement either dynamic or static management of your 5400 ATL system. Most importantly, they allow you to choose the right implementation for your installation.



Independent, dual robotics contribute to the high reliability of the Memorex Telex 5400 automated tape library.

HIGH AVAILABILITY WITH NO INTERRUPTIONS

The 5400 ATL has been designed as a fault-tolerant system. Full component redundancy ensures that failure of any single component will not interrupt automated processing. The fault-tolerant design of the ATL 5400 and the use of very large-scale integration (VLSI) technology for electronic components combine to form a system that is able to deliver years of trouble-free, uninterrupted operation. Reliability, availability, and serviceability are key elements of the Memorex Telex 5400 system.

INCREASED THROUGHPUT

The Memorex Telex 5400 ATL offers a choice of channel speeds and support for up to four controllers. These capabilities ensure that the high throughput the 5400 ATL system provides is not degraded by bottlenecks on the system channels. Operating at 4.5 megabytes per second (MB/sec), a fully configured 5400 ATL system features an aggregate data transfer rate of 18 MB/sec.

FLEXIBILITY

Memorex Telex offers 5400 ATL models with tape capacities of 658 to 5,152 cartridges. By installing multiple Memorex Telex libraries within one data center or multiple data centers, customers have the ability to automate over one million tape cartridges. With the 5400 ATL, customers have the opportunity for total automation.

PRODUCT HIGHLIGHTS

Providing customers with enhanced tape management and storage capabilities, the Memorex Telex 5400 automated tape library offers:

- Advanced management software
- Dynamic tape caching
- Fault-tolerant design
- Non-disruptive maintenance
- Enhanced Data Recording Capability (EDRC)
- Mass Entry Exit Facility (MEEF) (optional).

MEMOREX TELEX 5400 AUTOMATED TAPE LIBRARY SPECIFICATIONS

The table below indicates the range of specifications for all 33 models of the 5400 ATL system.

System Components	Channel attachment	4 to 24	
	Storage directors (controllers)	2 or 4	
	Channels per director	2, 4, or 6	
	Cartridge tape transports	4, 8, 12, or 16	
	Maximum directors per transport	2	
	Maximum transports per storage director	8	
	Accessors	2	
	Cartridge capacity	658 to 5152	
	Bar-code reader	Standard	
	Average time to move cartridge	10 seconds	
	Maximum number of ATLs per host system	255	
	Mass Entry Exit Facility	Optional	
	Fire Suppression System	Optional	
Cartridge Tape Transport and Recording Characteristics	Speed	2 mps (79 ips)	
	Density	37 871 bpi	
	Recording method	GCR	
	Error correction method	AXP	
	Number of tracks	18	
	Data transfer rate	3 MB/sec	
	Cartridge capacity	200 MB (non-compressed)	
	IBG length	2 mm (0.08 in)	
	Rewind time	32 seconds	
	Load/unload time	7 seconds	
EDRC compression format	Standard		
Data Transfer Rates	Storage director (controller) to channel	1.5 to 4.5 MB/sec	
Power Requirements	Phases	3	
	Line voltage	200-240 VAC @ 50/60 Hz 390-415 HVAC @ 50/60 Hz	
	Power connector	Russell Stoll	
Operating Environment	Temperature	15° C to 32° C (59° F to 90° F)	
	Altitude	0 to 3000 m (0 to 10,000 ft)	
Operating Systems	All operating systems listed supported by all models	<ul style="list-style-type: none">• MVS/XA™ 2.2 or above• JES2/JES3• TLMS/TMS• VM	
Specifications for Sample ATL Configurations			
Feature	Small Model-10B	Medium Model-42B	Large Model-84C
Controllers	2	2	4
Cartridge tape transports	4	8	16
Cartridge capacity	658	2,506	4,918
Storage capacity (GB)	132	501	984
Width (m / ft)	4.9 / 16	9.74 / 32	16.21 / 53
Depth (m / ft)	1.21 / 4	1.21 / 4	1.21 / 4
Height (m / ft)	1.80 / 6	1.80 / 6	1.80 / 6
Power consumption (kVA)	8.0	11.0	19.0
Heat output (kcal / Btu / hr)	5800 / 22,969	7400 / 29,304	12 800 / 50,794

Specifications subject to change.

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